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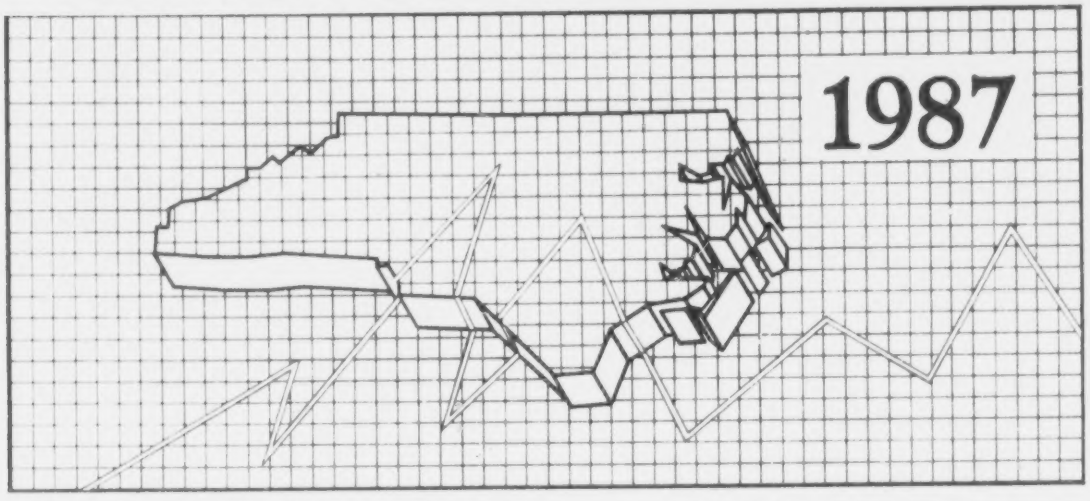
North Carolina Long-Term ECONOMIC-DEMOGRAPHIC PROJECTIONS



Office of State Budget and Management

STATE OF NORTH CAROLINA
James G. Martin
Governor

Table 1
NORTH CAROLINA LONG-TERM PROJECTIONS
(Average Annual Growth Rates)

	History				Forecast			
Economic	1970-1975	1975-1980	1980-1986	1970-1986	1986-1990	1990-1995	1995-2000	1986-2000
Employment:								
Total Nonagricultural	2.1%	3.8%	2.3%	2.7%	2.1%	0.9%	0.9%	1.2%
Total Manufacturing	-0.1	2.8	0.1	0.9	0.5	-0.5	-0.6	-0.2
Nondurable Goods	-0.7	1.2	-0.8	-0.1	0.4	-1.6	-1.4	-1.0
Durable Goods	1.2	5.7	1.7	2.8	0.7	1.1	0.5	0.8
Total Nonmanufacturing	3.5	4.3	3.3	3.7	2.8	1.4	1.4	1.8
Construction	1.9	2.3	5.2	3.3	0.6	-0.5	0.7	0.2
Transp., Comm. & Utilities	1.3	3.5	2.2	2.3	2.2	0.3	-0.3	0.6
Finance, Insurance, & Real Estate	3.4	3.0	3.2	3.2	4.4	2.0	1.7	2.6
Trade	3.1	4.6	4.0	3.9	2.7	1.6	1.6	1.9
Services	4.6	5.0	4.8	4.8	3.5	1.4	1.1	1.8
Government	4.5	4.5	0.7	3.1	2.5	2.0	2.1	2.2
Average Hourly Earnings, Manufacturing	7.4	8.9	5.8	7.3	4.1	6.4	7.2	6.0
Total Personal Income	10.4	11.8	8.7	10.2	6.2	7.3	7.9	7.2
Per Capita Personal Income	8.6	10.5	7.4	8.7	5.0	6.3	6.9	6.2
Real Disposable Income Per Capita	2.3	2.1	2.9	2.4	1.1	1.2	1.3	1.2
Demographic								
Total Population	1.63%	1.26%	1.20%	1.35%	1.10	0.94	0.88	0.96%
By ages: 0 - 4	-0.66	-0.88	0.79	-0.19	1.13	0.09	-0.36	0.23
5 - 17	-0.42	-0.71	-0.64	-0.48	-0.48	0.07	0.58	0.10
18 - 24	2.19	1.59	-0.22	1.09	-1.05	-0.01	-0.94	-0.64
25 - 64	2.50	2.01	2.03	2.17	1.75	1.27	1.28	1.41
65 +	4.32	3.34	3.11	3.56	2.99	2.10	1.76	2.23

Note: Rates are in percent.
Source: Data Resources, Inc. and the North Carolina Office of State Budget and Management.

North Carolina Long-Term Economic-Demographic Projections

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Preface

During the Spring 1980 Legislative Session, the North Carolina General Assembly amended Section 41 of the North Carolina General Statute 143.3.5 as follows:

"It shall be the duty of the Director [of the Budget] through the Office of State Budget and Management (OSBM) to coordinate the efforts of governmental agencies in the collection, development, dissemination and analysis of official economic, demographic, and social statistics pertinent to state budgeting. The Division shall (1) prepare and/or release the official demographic and economic estimates and/or projections for the State; (2) conduct special economic and demographic analyses and studies to support statewide budgeting;..."

Although the primary intent of this legislation is to provide for a uniform and readily available set of economic and demographic statistics for budgeting activities within state and local governments, the Office of State Budget and Management encourages the use of this information by the general public as an aid in business and social decision-making. In response to this legislative mandate, and the growing need for information regarding the long-term prospects for the national and state economies, this office is releasing its third issue of *North Carolina Long-Term Economic-Demographic Projections*. This publication is intended to provide the reader with a general analysis of the forces shaping the long-term economic outlook for the nation and the state, along with a detailed forecast for the period 1986 to 2000.

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Highlights

- Demographic considerations are a force in any long-term economic forecast, primarily through their effect on labor force growth. Growth in the labor force is expected to slow to approximately 1.2% per year as a result of a significant slowing in the rate of growth of the adult population, and a tapering off of increases in the female participation rate.

- Over the long-term, this slowdown in labor force growth will bring about a decline in the rate of increase in potential output, or real potential Gross National Product, from around 3.0% per year over the past 25 years to under 2.5% between 1986 and 2000.

- Recent employment trends are expected to continue over the forecast period with the service sector steadily gaining its share of new nonfarm jobs at the expense of the manufacturing sector.

- The rate of inflation is expected to increase only moderately over the long-term. The CPI is expected to increase by around 4.5% per year over the rest of this decade, accelerating to only 5.5% during the 1990's.

- Growth in real personal consumption expenditures is expected to average 2.0% between 1986 and 1990, and 2.3% thereafter. As usual, spending on durable goods is the fastest component of consumption, averaging 3.0% annual growth in real terms. Services spending increases by 2.5%, while nondurable goods trails at 1.5%.

- The near-term outlook for housing is strong as the "baby boom" generation passes through the age groups with the highest household formation rates. Between 1986 and 1992, housing starts will average 1.77 million units. Thereafter housing starts will recede to around 1.5 million units as the demographic tide turns.

- By the removal of the Investment Tax Credit, tax reform will weaken the outlook for business investment for the next several years.

- As a result of spending restraints and indirect tax increases, the federal budget deficit will slowly shrink as a percentage of GNP. By 2000, this ratio will have returned to its 1983 level.

- The dollar is expected to depreciate further, by an estimated 16% by 1989. As a result of the weaker dollar, the share of exports in GNP is expected to rise from 8.8% in 1986 to 14.3% by 2000.

- Domestic oil production is expected to decline from 8.9 million barrels in 1986 to 5.5 million barrels by 2000. Consequently, U.S. oil imports will increase beyond the 1977 peak of 9.6 million barrels. Although OPEC will once again exercise a measure of control over oil prices, the price of imported oil should remain well below its 1980 peak in real terms.

Long-Term National Economic Forecast

The national economic outlook which forms the foundation for the North Carolina economic and demographic projections has been provided by Data Resources, Inc. (DRI), a leader in national macroeconomic forecasting. DRI has produced four projections that incorporate different assumptions about the behavior of the economy over the long-term. The most important of these is the TREND projection, best described as the average of all possible paths that the economy could follow if subject to no major mishaps. The TREND is characterized by continued slow output growth, moderate inflation, relatively high unemployment, the eventual return of rising energy prices, and uncomfortably large federal and trade deficits. Although the North Carolina economic projections rely solely on the TREND national forecast, a brief description of the alternative national forecasts is provided at the end of this section.

While DRI's long-term projections have recognized for some time that the twin deficits (federal budget and trade) represent the two largest clouds on the economic horizon, they have also assumed that gradual progress toward eliminating these problems would occur. This possibility is now becoming increasingly remote. After posting an unexpectedly large deficit of $220.7 billion in federal fiscal 1986, the expectation now is that the deficit for fiscal 1987 will be no smaller than $170 billion despite the best efforts of the President and Congress to adhere to the Gramm-Rudman-Hollings deficit targets. Given that tax reform will mean a significant tax cut in fiscal 1988, it will be even more difficult to reduce the budget deficit in that year.

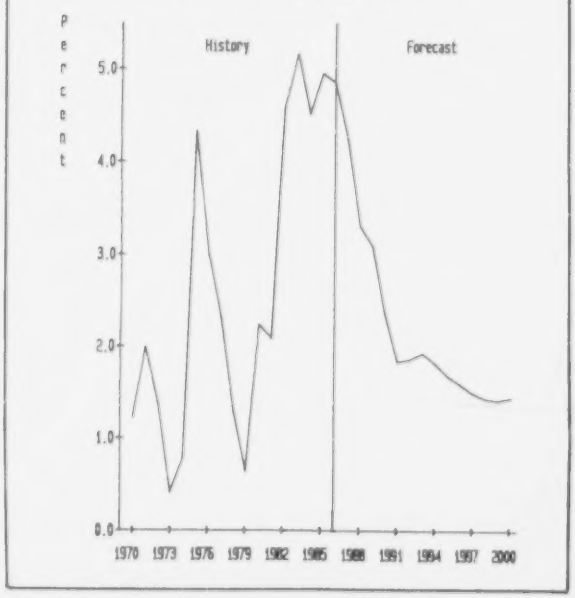
In the meantime, the foreign trade balance continues to deteriorate. DRI's econometric work suggests that real net exports (exports minus imports in constant dollars) should begin to improve about 12 months after the real exchange rate of the U.S. dollar begins to depreciate; this improvement is therefore long overdue.

Although recent news on the deficits has been disappointing, this should not drastically change the tenor of the long-term projection. DRI continues to assume that these deficit problems will be brought gradually under control. In particular, the trade imbalance is now expected to remain the most critical and uncertain element in the outlook. In 1990, the TREND scenario projects a slow, steady improvement in the current account to $85 billion (1.6% of GNP). Further reductions are unlikely thereafter as the dollar begins to appreciate once again and oil prices firm. Thus the TREND (as well as the alternative projections) assumes that the U.S. will run trade deficits through the year 2000.

This, of course, is not the only possible outcome. The trade balance could be brought back into balance well before the end of the century -- though possibly with the dollar considerably below its current value.

The outlook also assumes that Congress will make significant progress on the federal deficit in the short-term. While the Gramm-Rudman-Hollings targets are missed by a relatively wide margin, continuous downward pressure on spending narrows the deficit from $188 billion (4.3% of GNP) in 1987 to $96 billion (1.7% of GNP) by 1991. Further improvement beyond that year requires some action on the revenue side; DRI therefore assumes progressively greater increases in indirect taxes over the period 1992-2000.

Chart 1
FEDERAL GOVERNMENT DEFICIT
AS A PERCENT OF GNP



One important new element affecting the long-term economic outlook is federal tax reform. The most significant long-range impacts resulting from tax reform would show up in the projections of investment and capital stock, and hence in the poten-

tial supply of the economy. Whether tax reform increases the potential output of the economy depends upon whether its positive effects on labor supply and on total productivity (efficiency) outweigh its negative impact on capital formation. DRI's analysis suggests that this is unlikely to be the case: whatever other virtues tax reform may have, its effect on the economy's growth potential appears to be slightly negative. Tax reform is expected to bring about a drastic reduction in the share of corporate cash flow as a percent of GNP, the result of removing the investment tax credit and lengthening depreciation lifetimes. The reduction in corporate cash flow causes the outlook for investment to be less optimistic, implying a slower rate of growth of potential Gross National Product.

Forecast Detail

National Demographic Assumptions

Demographic considerations are a primary driving force in any long-term projection. The growth rate of the population and changes in its composition have considerable impacts on the expected rate of growth of the labor force, the full-employment unemployment rate, the demand for housing, and several other spending categories (most notably motor vehicle sales and purchases by state and local governments).

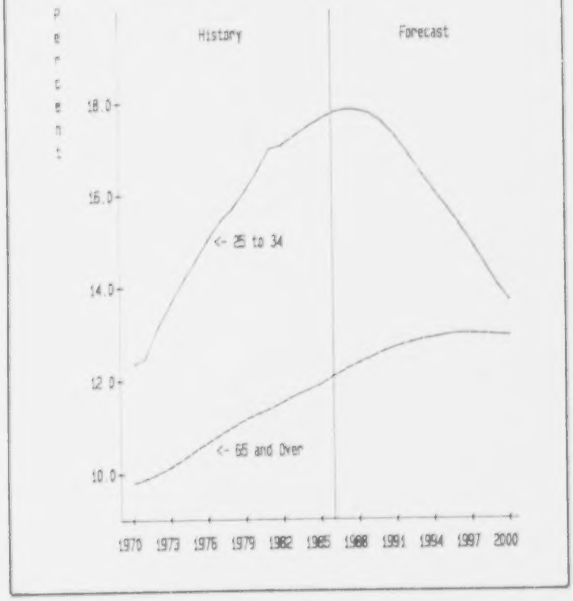
All U.S. population figures in the DRI projections are consistent with the Census Bureau's "middle-growth" series. This projection assumes that the fertility rate (the average number of children that each woman would bear if she experienced average age-specific fertility during her childbearing years) levels off at 1.9; immigration averages 450,000 per year; and the morality rate continues to decline slowly.

The total U.S. population is thus to increase from 242 million in 1986 to 269 million in 2000. This implies a continued slowdown in the rate of population growth. For the projection period as a whole, total population growth averages 0.8% per year, compared with 1.0% since 1972 and 1.3% between 1958 and 1972. The rate of growth of the adult population (aged 16 and over) will slow even more drastically -- from 1.6% over the past 14 years to 0.9% over the next 14.

Various age groups exhibit some noteworthy growth patterns. For example the population aged 25 to 34, the prime homebuying group, peaks at 17.9% of the total population in 1987; it remains close to that peak through 1991, then falls rapidly through the rest of the decade and beyond.

Over a long span of history, the share of the population under the age of 16 has declined while that of the elderly (over the age of 64) has grown. This pattern is projected to continue, although the share of the elderly will stabilize for several years in the late 1990s because of the low birth rates during the Depression.

Chart 2
POPULATION SHARES:
AGES 25 TO 34 AND 65 AND OVER



By 2025, there will be as many elderly people as children in the population. By comparison, in the year 1900 there were nine children for every one person over the age of 64. The most dramatic increase in the share of total population by the elderly takes place after 2011, well beyond the end of the projection period. Again this is a consequence of the postwar "baby boom", and it will put a severe strain on the Social Security system.

Participation Rates and the Labor Force

From 1948 to 1963, the labor force participation rate (the ratio between the labor force and the civilian population) was essentially flat, with declines in male participation approximately offset by increases in female participation. By 1986, however, the participation rate had risen to 64.3%, up from 57.6% in 1963. Between 1963 and 1986,

female participation grew from 37.7% to nearly 54.0%, with women thus contributing 60% of the labor force growth during that period.

Over the past quarter-century, the labor force expanded at a 2.0% average annual rate, rising from 68.4 million to 115.5 million. Growth was especially strong during the 1970s, when the labor force averaged 2.7% annual gains -- higher than in any decade since the 1900s. This impressive growth reflects not only higher female participation rates but also the maturing of the 'baby boom" generation. The number of people turning 18 in any one year rose from 2.3 million in 1958 to 4.3 million in 1979; therefore the adult population, from which the labor force is drawn, grew significantly faster than total population.

Table 2
U.S. DEMOGRAPHIC CONSIDERATIONS
(Average Annual Percent Change)

	1958-1972	1972-1986	1986-2000
Population	1.3%	1.0%	0.8%
Adult Population	1.6	1.6	0.9
Labor Force	1.8	2.2	1.2
Real GNP Per Capita	2.5	1.5	1.8

Source: Data Resources, Inc.

Labor force growth is expected to decelerate rapidly over the projection period for reasons that are closely connected with its recent expansion. First, increases in female participation must eventually taper off, if only because the participation rates for many age groups are approaching those for males. Second, growth in the adult population will slow markedly, with the number of people turning 18 fading to only 3.2 million by 1994. As a result the labor force is expected to expand by an average of only 1.2% annually between 1986 and 2000, little more than one-half the rate recorded in the last quarter-century. As discussed below, this decline has important implications for the economy's ability to increase supply.

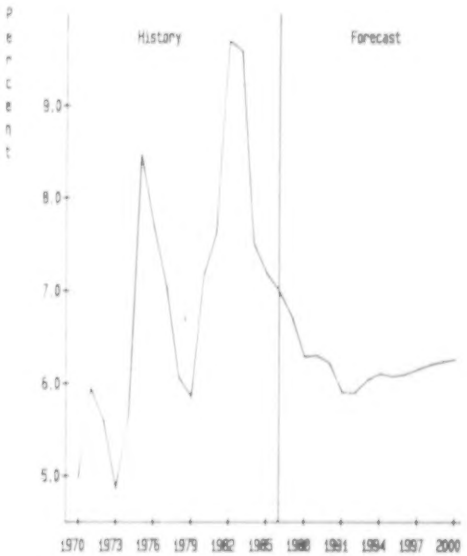
Table 2 summarizes the outlook for population and labor-force growth. The convergence in growth rates over the projection period implies that the United States will be less able to increase output simply by sending to work a progressively larger proportion of the population.

Employment and Unemployment

The near-term certainty that labor-force growth will slow considerably has already been discussed. In line with this slowdown, employment growth will also be markedly slower than in recent years. Annual increases in household survey employment should average 1.8% between 1986 and 1990, and then slow to 1.0% thereafter. For the projection period as a whole, employment is expected to increase by 21%, a significant reduction from the 36% recorded between 1972 and 1986.

Growth patterns for the establishment employment series are similar. Between 1986 and 2000, service sector employment will increase by 28% while

Chart 3
U.S. CIVILIAN UNEMPLOYMENT RATE



goods producing employment will rise by only 2%. The private service sector accounts for 77% of all new jobs added.

After improving rapidly from its peak in November 1982, the unemployment rate has been nearly flat since mid-1984. Since the immediate outlook for economic growth remains moderate, rapid falls in the unemployment rate are unlikely to take place. It should improve slowly to an average of 6.3%, the best the economy can achieve if it is to avoid persistent inflation problems.

Productivity and Potential Output

Long-term projections of the economy must look first at the forces that generate **supply** of output rather than those that generate **demand** for output. A TREND projection thus begins by asking how much output the economy is capable of producing 10 to 15 years from now, leaving the question of how that output may be divided among consumption, investment, government spending, etc., until later. In analyzing supply, economists focus upon the concept of potential output -- that output that could be produced at a relatively low but stable level of unemployment and a relatively high but stable level of capacity utilization. The rate of growth of potential output is determined by the rate of growth of factors of production (principally labor and capital), and the rate of change in the productivity (partially related to changes in spending on research and development and the age of the capital stock). Table 3 shows how the factors of production and productivity growth contribute to the growth of real potential output. For instance, during the period 1958 to 1972, growth in the labor force and the capital stock contributed nearly equally to the growth of potential output. With industry and government investing heavily in research and development, potential output grew at an average annual rate of 3.1%. The slowdown in potential output growth between 1958-72 and 1972-86 reflects the impact of reduced real business fixed investment on the growth of the capital stock, smaller gains in energy usage, and cutbacks in R&D spending. The residual productivity term also fell, due largely to effects of the energy crises on the efficiency of the existing capital stock.

Table 3
CONTRIBUTIONS TO REAL POTENTIAL GNP
(Average Annual Percent Growth)

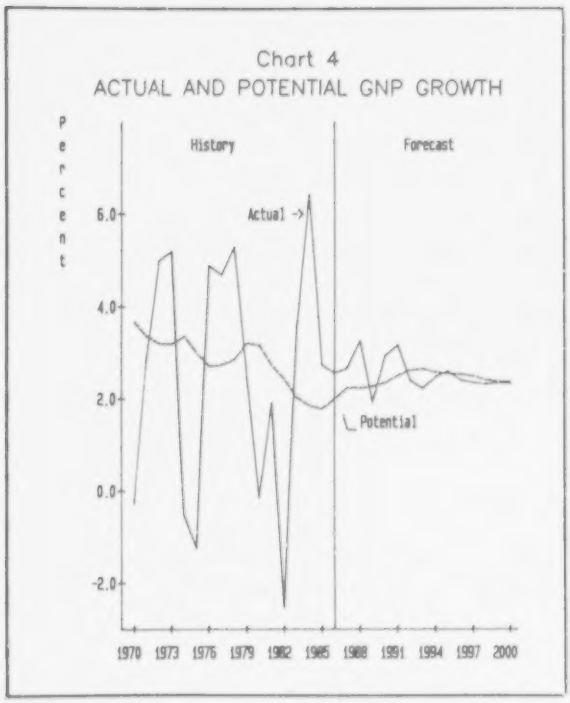
	History		Forecast
	1958 -1972	1972 -1986	1986 -2000
Factors of Production			
Labor Force (0.698)	1.00%	1.60%	0.82%
Capital Stock (0.254)	0.99	0.86	0.88
Energy (0.048)	0.18	0.01	0.06
Productivity Factors			
Research and Development	0.76	0.14	0.44
Age of Capital Stock	-0.06	-0.06	-0.04
Residual	0.27	0.09	0.29
Real Potential Growth	**3.14**	**2.64**	**2.45**

Note: Real Potential Output is the sum of the contributions of the Factors of Production and Productivity Factors. Figures in parentheses are production function weights.

Source: Data Resources, Inc.

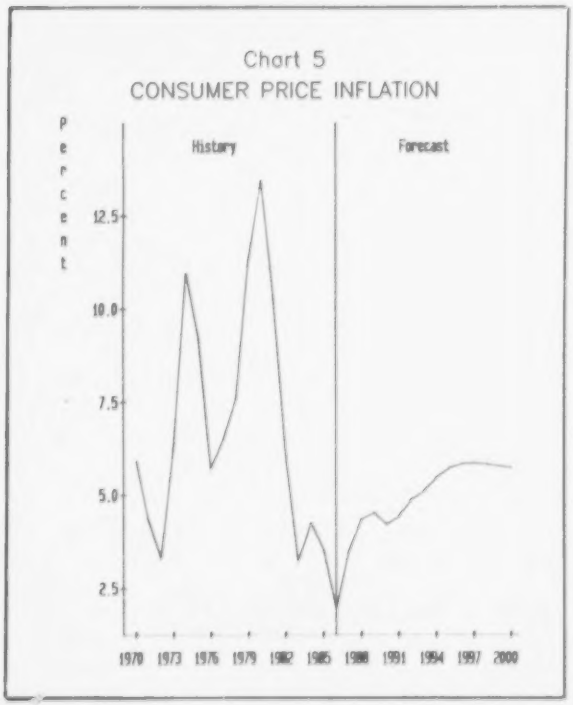
Potential output growth should hold up fairly well into the early 1990s with the recovery in business fixed investment and R&D spending offsetting the steady slowing in labor-force growth. Eventually, though, the effects of slower labor-force growth will become dominant and, in a sense, self-reinforcing. As output growth slows, business fixed investment rises less rapidly, limiting capital-stock growth and thus future increases in output. For the full period 1986-2000, real potential output is expected to grow at an annual rate of 2.5%, slightly less than the 2.6% registered during the previous 14 years.

In the TREND outlook, there is a fairly direct link between growth in the economy's potential output and its actual output (Gross National Product). Actual output growth can differ from potential output only if the economy's level of utilization changes, up or down. Because the utilization level tends eventually to stabilize in the TREND scenario actual output growth converges to that of potential as shown in Chart 4.



Inflation

Prolonged weakness in the economy between 1980 and 1983 allowed substantial inroads against inflation. The rate of increase in the Consumer Price Index - All Urban Consumers (CPIU) dropped from 13.5% in 1980 and 10.4% in 1981, to 6.2% in 1982 and to only 3.2% in 1983. Since then inflation has remained low; the CPIU increased by only 1.9% in 1986, reflecting the collapse of oil prices. With inflation expectations broken and no episodes of overly stimulative policy expected, the favorable outlook for inflation continues for the remainder of this century. The CPIU is expected to average annual increases of 5.1%.

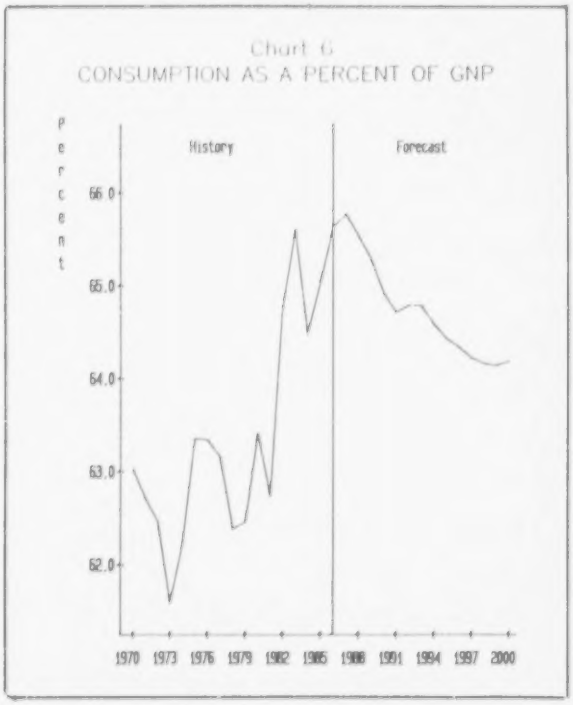


The GNP deflator is forecast to average only 3.4% annual increases between 1986 and 1990. It accelerates moderately thereafter as energy prices rise in the early 1990s.

Compensation averages a 6.3% nominal rate of gain between 1986 and 2000, implying real growth of 1.4%, in line with productivity advances.

Consumer Spending

Growth in consumer spending is forecast to average 2.0% between 1986 and 1990, and 2.3% thereafter. The average growth rate is 2.2% for the entire period, down from 2.9% between 1972 and 1986. As usual, spending on durable goods is the fastest growing component, averaging 3.0% annual growth in real terms, followed by services at 3.0%, and nondurable goods at 1.5%.

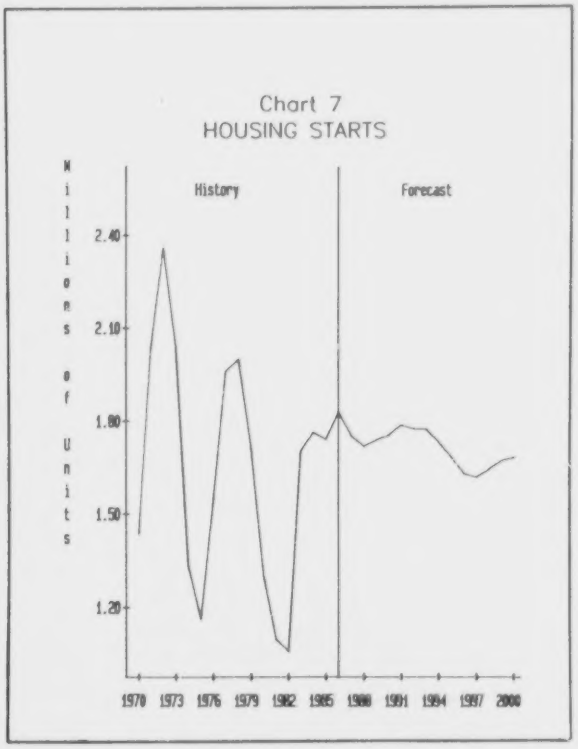


As a percentage of GNP, personal consumption expenditures reached 65.8% in 1986, marginally above the 33-year high of 65.6% in 1983 and well above the post-1950 average of 63.1%. This strength reflects the fact that consumption fell less than other demand components during the 1980-82 recession and provided much of the impetus for the current recovery. Indeed, consumption has been so strong that the personal savings rate is expected to be just 3.9% this year, its lowest reading since 1949.

Consumption's share of GNP will remain above 65% in 1987, reflecting the personal tax cut under tax reform; eventually it should retreat to more normal levels (Chart 6).

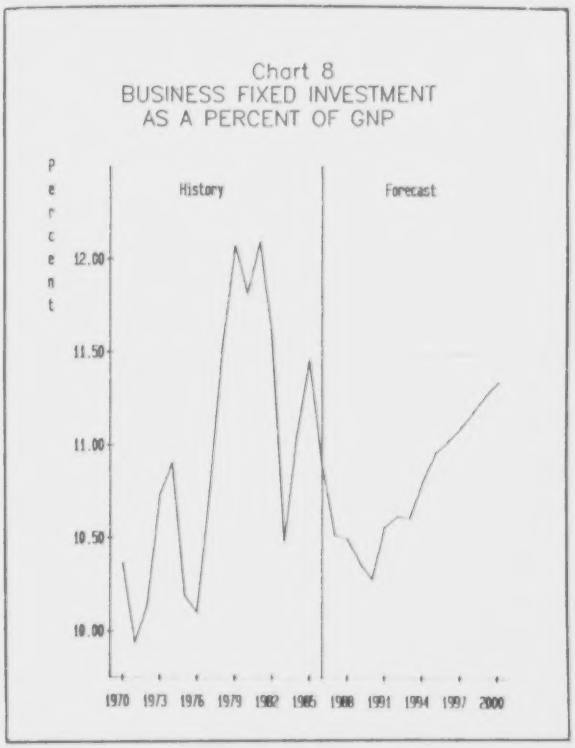
Housing

The long-term outlook for housing is determined primarily by demographic pressures and income growth. Demographic demand for housing will remain strong for several years as the "baby boom" generation passes through the age groups with the highest household formation rates. Between 1986 and 1992, housing starts are thus expected to average 1.77 million units annually. The demographic tide will then turn, pushing housing down to less than 1.65 million units per year between 1995 and 1999. Although demographic demand will increase somewhat in the late 1990s as the children of the oldest "baby boomers" move into the high household formation years, starts will recede thereafter, eventually settling down close to 1.5 million units annually. The years between now and the early 1990s, therefore, are likely to be the last strong period for housing for several decades.



Business Investment

After a phenomenally strong recovery in 1983-84, business fixed investment has faded. Spending on new plant and equipment in the manufacturing sector has been slowed by currently under-utilized capacity. Commercial construction has weakened as signs of over-building in many metropolitan areas have become more obvious, and low energy prices have curtailed spending in the mining and petroleum industries. Tax reform, particularly because it removes the investment tax credit, also contributes to a relatively weak investment outlook for the next several years. Eventually, however, relatively stable credit conditions, smooth output expectations, and steady cash flow should enable



the share of GNP devoted to business fixed investment to resume its upward trend. This share averages 10.8% of GNP, down slightly from its average for the past 14 years. In real terms, business fixed investment is projected to grow at an average of 3.7% annually, identical to the average growth rate recorded since 1972.

Government

The TREND projection assumes that Congress fails to achieve the Gramm-Rudman-Hollings targets, although downward pressure on federal spending continues. As a result, the fraction of GNP passing through the federal budget shrinks from 4.6% in 1986 to 1.7% in 1991. This is not enough, however, to eliminate the long-term deficit problem: with no further action, the deficit would hover near 2% of GNP in perpetuity -- even assuming that it had no unexpectedly harmful effect on the output of the economy. Accordingly, the TREND projection incorporates indirect tax increases in 1992 and beyond which boost revenues by $64 billion (2.7% of federal receipts) by 2000.

Given continued pressure on spending and this tax increase, the deficit shrinks from $204 billion in 1986 to $96 billion by 1991. Even though the deficit widens again after 1991, higher excise taxes and steady economic growth reduce the deficit share of GNP to 1.45% by 2000.

In the decade ahead, state and local governments will have to balance rising demands for public services with available resources. Federal budget cuts, competition between states for new industry, and voter resistance to new taxes will all limit revenue growth. Meanwhile, spending for education, environmental protection, infrastructure repairs, and retirement pensions will accelerate.

The shifting role of state and local governments in the economy reflect demographic trends and changes in federal funding. With the school-aged population expanding and the federal government initiating grants-in-aid, state and local government expenditures rose from 9.7% of GNP in 1960 to a peak of 14.7% in 1975. When the school-aged population decreased and the federal government cut domestic programs, state and local spending dropped back to 12.5% of GNP in 1984. Over the projection period, rising outlays for education and capital projects will again boost the share to 13.9%.

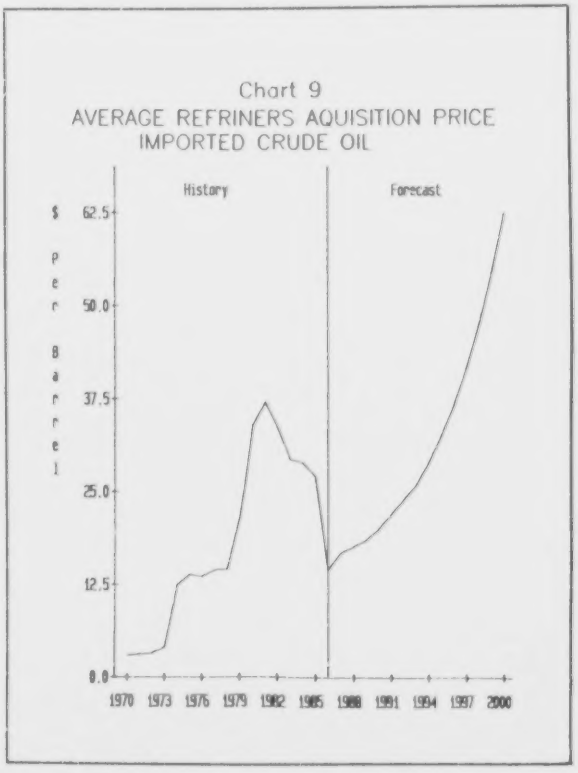
Trade

Net exports could well remain in deficit throughout the rest of this century, despite the depreciation of the dollar that has already taken place. The dollar is expected to depreciate by another 16% by the end of 1989, and then stabilize somewhat below its 1980-82 value. After rising from 6.6% of GNP in 1971 to 12.8% in 1980, the export share has fallen sharply due to the strength of the dollar, the weakness of our trading partners' economies, and the financial difficulties of many developing nations. The losses in export volume in three of the last five years are unprecedented in the postwar period. The share of exports in GNP reached a low point of 8.9% in 1986 and should rise steadily to 14.3% by 2000. This projection clearly assumes no outbreak of protectionism.

Significant deficits in merchandise trade will be only partially offset by surpluses in the services account. The merchandise trade deficit is expected to decrease from 3.9% of GNP in 1986 to 2.2% by 1990. Thereafter, further improvement is unlikely because of the eventual increase in the nation's need for imported energy.

Energy

DRI predicts that the average acquisition price of foreign oil will remain below $20 per barrel until 1990. At its lowest point in 1987, the real price of imported oil will be only about one-third of its 1980



peak, implying that domestic energy prices will drop both in 1986 and 1987, having already fallen in the past four years.

Significant energy inflation is likely to return by the mid-1990s as growing worldwide demand increases the call on OPEC to such an extent that the cartel regains some pricing power. While the precise timing of such price hikes cannot be determined in advance, the TREND projection assumes that oil prices rise from $20.00 per barrel in 1990 to $62.50 per barrel in 2000.

Despite the recent precipitous drop in energy prices, conservation has not yet run its course and demand is expected to grow consistently less rapidly than GNP. The amount of energy consumed per real dollar of GNP in the year 2000 will be only about 60% of what it was at its peak in 1970.

Conclusion

On average, economic growth over the rest of this century should be somewhat slower than in the last 25 years. The ingredients of this outlook are, to a large extent, already in place. It is the supply side of the economy that dictates the slowdown: labor-force growth will be constrained by demographic forces that cannot be quickly reversed, and capital-stock growth will be relatively moderate.

Alternative Economic Projections

As previously mentioned, DRI prepared four long-term economic projections for the U.S. economy. The principal TREND projection assumes that the economy suffers no major economic mishaps between now and the year 2000. In this simulation, the economy settles down to smooth growth, with actual output approximately equal to that of potential output.

The main alternative projection, CYCLE, explicitly incorporates business cycles throughout the next 14 years. Since the economy does suffer major mishaps in this scenario, the amplitude of the cycles is larger, on average, than those implicit in the TREND projection. As a result, the path of capital accumulation is lowered relative to TREND, and total productivity growth is also impeded. (See Table 5.) These considerations lead to a permanent reduction, relative to the TREND projection, of the economy's potential growth. The loss in actual output by 2000 is 3.4%.

It cannot be stressed too strongly that the timing of fluctuations in economic activity in CYCLE is suggestive only; it is clearly impossible to predict the timing of business cycles years in advance.

The other alternative projections, OPTIM and PESSIM, also depict fairly smooth economic growth, but at significantly different rates. These "bandwidth" projections differ from the TREND in both their supply-side assumptions and their inflation outlooks. In the OPTIM scenario, the labor force and the capital stock are assumed to grow more quickly, and technological change also proceeds at a faster pace. Potential output thus grows about 0.4% per year more rapidly. Since output is principally supply-determined in the long run, the difference in real GNP growth is also 0.4% per year. The rate of inflation in this scenario is assumed to average only 4.15% over the projection period.

In the PESSIM case, growth is reduced by an average of 0.4% annually relative to TREND. Even small differences in growth, however, can accumulate significantly over a 14 year period: in 2000, the difference in real GNP between in low and high trends is 10% of the central TREND value. The rate of inflation in the PESSIM case worsens after a period of weak growth in 1986-87, eventually stabilizing close to 7%. This puts the price level 19% above the medium-TREND value by 2000.

DRI does not assign explicit probabilities to its long-run projections. The underlying rate of growth in the TREND scenario is most consistent with the historical record and with what can be conjectured about the unfolding structure of the economy. The range of uncertainty about growth is certainly wide enough, however, to encompass each of the other projections.

Table 4
NATIONAL LONG-TERM PROJECTIONS FROM DATA RESOURCES, INC.
(Average Annual Rates of Change)

	History				Forecast			
	1970-1975	1975-1980	1980-1986	1970-1986	1986-1990	1990-1995	1995-2000	1986-2000
Composition of Real GNP								
Gross National Product	2.2%	3.4%	2.4%	2.7%	2.8%	2.6%	2.4%	2.5%
Final Sales	2.4	3.4	2.3	2.7	2.7	2.5	2.4	2.5
Total Consumption	2.8	3.2	3.2	3.1	2.0	2.4	2.1	2.2
Nonresidential Fixed Investment	1.3	6.2	3.1	3.5	2.2	4.8	3.9	3.7
Residential Fixed Investment	1.0	3.6	6.0	3.7	1.7	0.2	0.7	0.8
Prices and Wages								
Implicit Price Deflator	7.1	7.7	4.9	6.5	3.4	5.0	5.6	4.8
CPI-All Urban Consumers	6.8	8.9	4.9	6.7	4.3	5.1	5.8	5.1
Average Hourly Earnings-Mfg.	7.2	8.0	4.9	6.6	3.6	5.9	6.7	5.5
Production and Other Key Measures								
Industrial Production	1.6	5.1	2.4	3.0	2.8	3.1	2.8	2.9
Housing Starts [Mil. Units]	1.79	1.70	1.53	1.67	1.76	1.76	1.64	1.72
Unemployment Rate [%]	6.1	6.8	8.1	7.1	6.5	6.1	6.3	6.3
Federal Budget Surplus [NIPA, $Bil]	-25.1	-41.3	-159.6	-80.6	-149.2	-114.8	-142.3	-134.4
Money and Interest Rates								
Money Supply [M-2]	10.0	10.1	9.4	9.8	6.8	7.8	8.1	7.6
New High-Grade Corp Bond Rate [%]	7.9	9.4	12.2	10.0	8.4	8.9	9.2	8.9
Federal Funds Rate [%]	6.8	8.6	10.5	8.8	5.5	7.1	7.2	6.7

Note: Growth Rates are calculated between the years in the column headings. Averages are for the periods 1971-1975, 1976-1980, etc.

Source: Data Resources, Inc., TRENDLONG1286 National Economic Forecast.

Table 5
ALTERNATIVE NATIONAL ECONOMIC FORECASTS
1987 TO 2000

	1986-1990	1990-2000	1986-2000
Real Gross National Product			
TREND	2.8%	2.5%	2.5%
CYCLE	2.2	2.3	2.3
OPTIM	3.1	3.1	3.1
PESSIM	1.3	2.2	2.0
GNP Deflator			
TREND	3.4%	5.3%	4.8%
CYCLE	4.0	5.8	5.3
OPTIM	3.9	4.0	4.0
PESSIM	3.8	7.0	6.1
Industrial Production			
TREND	2.8%	2.9%	2.9%
CYCLE	1.9	2.6	2.4
OPTIM	3.1	3.7	3.5
PESSIM	0.0	3.0	2.1
Civilian Unemployment Rate (Average Level)			
TREND	6.5%	6.2%	6.3%
CYCLE	6.6	6.9	6.8
OPTIM	6.1	6.1	6.1
PESSIM	7.2	6.6	6.7

Source: Data Resources, Inc., December 1986.

Highlights

- Population in North Carolina will top 7.2 million by the year 2000, an increase of over 900,000 persons since 1986. During the next 14 years, the nonwhite population will grow twice as fast as the white population (22.6% vs. 11.6%).
- The median age of the population will increase by nearly 5 years during the forecast period, moving from 31.7 years in 1986 to 36.5 years in the year 2000.
- The number of children under 5 years of age is expected to increase by 3.2% (13,700) between 1986 and 2000, reversing the trend of the previous 14 years as the "baby boom" females age into the key child-bearing age groups.
- The traditional college age (18-24) population is expected to undergo a major reversal during the next 14 years, declining by 9.4% (70,000) after growing by 19.0% since 1970.
- The retirement age population (65+) will continue to grow at a tremendous rate, reaching almost a million by the year 2000. Between 1985 and 2000, an increase of 36.2% (264,000) is expected.
- Industrial output in North Carolina is expected to grow by 2.0% between 1986 and 2000. The fastest growing industries will include nonelectrical and electrical machinery, plastics, instruments, and printing/publishing, while the leather, textiles, tobacco, apparel, and lumber industries will either grow at slow rates or decline.
- Mainly as a result of demographic forces, growth in the North Carolina civilian labor force will slow to 1.1%, compared to a rate of 2.3% since 1972. The state labor force is expected to reach 3.76 million by the year 2000.
- Consistent with the expected slowing in labor force growth, the rate of increase in employment will decline over the next 14 years. Growth in total nonfarm employment is forecast to be 1.2% per year, down from 2.6% during the period 1972 to 1986.
- Reflecting past trends, the state's nonmanufacturing sector will be the primary source of new jobs. Importantly, many of these jobs will be in the high wage service categories (business, health, and professional).
- The state's average manufacturing wage is expected to increase from $7.55 in 1986 to $17.12 in 2000, an average annual increase of 1% after adjusting for inflation.
- Housing starts in North Carolina are expected to peak at around 88,500 units in 1988 before falling back to a more sustainable rate of 75,000 to 80,000 in the 1990's.

Long-Term North Carolina Economic Forecast

Following the national example, 1986 was a year of moderate but steady growth for the North Carolina economy. Total nonagricultural jobs increased by 77,100 during 1986, slightly less than the 80,400 new jobs created in 1985. Consistent with the secular trend in the composition of total nonfarm employment, the nonmanufacturing sector created *all the net new jobs in the state.* Nonmanufacturing employment gains were led by the trade, services, and contract construction industries.

Manufacturing employment held nearly steady in 1986 (down 600 jobs), following an 8,200 drop in total jobs in 1985. While the durable goods sector, particularly the nonelectrical and electrical machinery industries, was experiencing layoffs in 1986, the nondurable goods sector was recovering, increasing its total payroll by 5,100 employees, led by textiles, apparel, and printing and publishing.

Total personal income in North Carolina is estimated to have increased by 6.6% in 1986, down slightly from a 7.2% gain in 1985. With employment growth off slightly in 1986, total wage and salary disbursements increased by 7.8% compared to 8.4% in 1985. The growth in nonwage personal income experienced a more noticeable decline as a result of falling interest rates and the impact of the severe drought on farm cash receipts from crops.

The near-term outlook calls for continued slow, uninterrupted growth through the rest of the decade. Total nonfarm jobs are expected to increase at an annual rate of 2.1% between 1986 and 1990, compared to 2.3% growth for the 1980-1986 period. Once again the nonmanufacturing sector will lead the way, increasing jobs by 2.8% per year. However, in manufacturing both the nondurable and durable goods sectors will see employment gains between 1986 and 1990.

The outlook for manufacturing employment is less favorable during the 1990s. Slow growth in consumer spending on nondurable goods nationally and the continued loss of production to lower-wage countries are expected to shrink the ranks of nondurable goods employees by 71,100 during the decade. As was the case over the past 14 years, the state's textile and apparel employees will be hardest hit as their employers continue to modernize and restructure their product lines in an effort to compete in the world markets.

Relatively strong growth in consumer spending on durable goods and a resurgence of business fixed investment will create an expected 28,500 new jobs in the state's durable goods manufacturing industries during the 1990s, with the largest gains in machinery (nonelectrical, 9,600 and electrical, 7,600) and furniture (8,500).

Although growing more slowly than in the two previous decades, the nonmanufacturing sector will continue to employ an increasing share of the state's labor force. By the year 2000, 75.2% of all nonfarm jobs will be in nonmanufacturing compared to 59.6% in 1970 and 69.6% in 1986.

Forecast Detail

North Carolina Demographic Assumptions

Recent Trends

Recent trends in North Carolina's population show a large decline in growth from 1985 to 1986, following a surge in growth from 1983 to 1985. From 1980 to 1983 the annual growth rate was around 1.0% and between 1983 and 1985 the annual growth rate jumped to around 1.5%. Between 1985 and 1986 the annual growth rate once again declined to 1.1%.

Recent trends in North Carolina's population growth are almost entirely due to corresponding trends in net migration into the state. During the period 1970 to 1983, annual net in-migration varied between 0.42% and 0.45% of the current total population, never exceeding 27,000 persons. Between 1983 and 1985 annual net in-migration more than doubled that of the 1970 to 1983 period to around 0.90%, averaging more than 55,000 persons. Annual net in-migration declined once again between 1985 and 1986 to 0.55% or 34,000 persons.

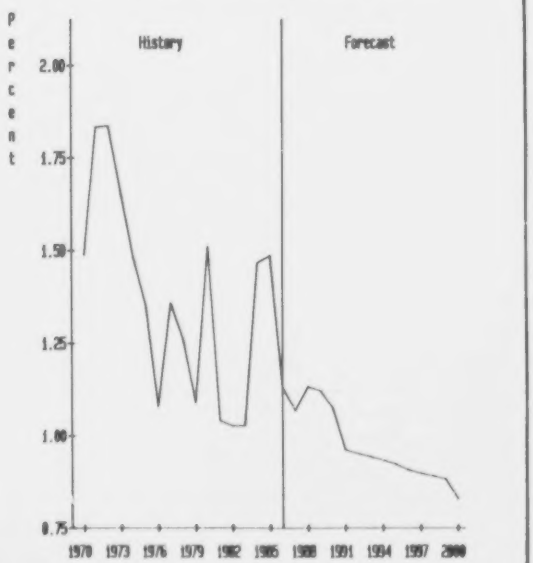
Projected Trends

Overall, North Carolina total population is expected to increase from 6.33 million in 1986 to 7.24 million in the year 2000. This represents an average annual rate of growth of 1.0%, down from 1.3% during the most recent 14 year period. The fundamental basis for projections of North Carolina's popula-

tion is the population base reported in the 1980 federal census. The "aging forward" of this base characteristics these projections, migration trends providing only minor adjustments. The median age is rapidly increasing (moving from 26.6 years in 1970 to 31.7 years in 1986, and projected to reach 36.5 years by 2000). This effect of aging forward causes projected births to rise and then fall in spite of the steadily rising fertility rate. It causes projected deaths to increase rapidly, despite an improving mortality rate. Only the assumption of fairly constant net in-migration is not affected by the rising median age.

North Carolina's total white and nonwhite fertility rates are currently significantly less than the national average and are expected to remain as such in the future. If childbearing for women of all ages continues at its current (1985) rate, the average white woman in North Carolina will have 1.58 children during her lifetime and the average nonwhite woman will have 1.87. The corresponding averages for the nation are 1.80 for whites and 2.31 for nonwhites. Between 1985 and the year 2000, white fertility for both North Carolina and the nation is projected to increase, yielding averages for lifetime children per white female of 1.66 for North Carolina and 1.90 for the nation by the year 2000. Nonwhite fertility is projected to change much less than white fertility, yielding averages for lifetime children per nonwhite female of 1.90 for North Carolina and 2.29 for the nation by the year 2000. In spite of steadily increasing projected fertility, however, both white and nonwhite births are expected to peak in the late 1980s and early 1990s, as the effect of the "baby boom" cohorts moving through their prime childbearing years dominates any changes in fertility.

Chart 10
RATE OF GROWTH IN N.C. POPULATION



In general, North Carolina death rates are slightly higher than those for the nation, although for young women of all races the rate is slightly lower. Over the forecast period, North Carolina death rates are expected to converge toward national rates, although full equality is not expected before the year 2080. For the nation as a whole, life expectancy at birth is projected to increase by almost 2 years from 1985 to the year 2000, as death rates drop significantly in all age, race, and sex groups. North Carolina will mirror this improvement. Despite an improving life expectancy, the number of deaths in North Carolina will continue to rise as a result of the "aging" of the population.

Net migration to North Carolina is projected to follow recent experience (1980-1986). During the 1980s and 1990s decades, net in-migration should average approximately 39,000 per year with the influx in the 1980s slightly larger than in the 1990s (see Table 8).

North Carolina's population will continue to grow through the end of the century, topping 7.2 million by 2000. However, the rate of growth of North Carolina's population over the forecast period (1986-2000) is expected to slow relative to the growth of the previous 14 years (1972-1986), as the a "baby boom" generation passes through the prime childbearing years.

Between 1986 and 2000, the nonwhite population will grow roughly twice as fast as the white population (22.6% vs. 11.6%), the result of the nonwhite rate of natural increase remaining more than twice the corresponding white rate. However, both populations will grow at a rate somewhat slower than during the previous 14 years, as the annual rate of natural increase (births minus deaths) declines for both groups. The nonwhite population composed 23.2% of the state's population in 1970, and rose to 25.2% in 1985. It is expected to constitute 27.3% of the state's population by the end of this century.

The number of children under 5 years of age is expected to increase by 3.2% (13,700) during the

Table 6

NORTH CAROLINA POPULATION ESTIMATES AND PROJECTIONS, 1970-2000

By Selected Age Groups, Race, and Sex

	July 1970[1]	July 1975[1]	July 1980[1]	July 1985	July 1986	July 1987	July 1988	July 1989	July 1990	July 1992	July 1995	July 2000
Total	5,107,830	5,538,200	5,895,729	6,260,716	6,331,288	6,398,784	6,471,199	6,543,615	6,613,794	6,740,734	6,930,994	7,241,559
Ages												
0-4	436,928	422,803	404,495	418,703	424,026	428,962	434,208	439,480	443,535	444,568	445,601	437,711
5	94,581	89,069	82,673	79,390	79,159	78,866	78,625	78,384	78,598	81,765	85,973	83,467
6-13	815,495	785,872	747,442	717,785	715,573	712,033	709,665	706,120	704,508	715,412	731,446	750,047
14-17	412,531	420,100	419,690	398,196	399,462	397,815	392,675	388,853	388,534	379,959	358,557	377,079
18-21	420,420	459,230	486,941	453,516	448,832	447,271	449,661	454,011	454,421	442,316	433,058	438,642
22-24	261,132	300,293	335,092	370,740	362,237	353,134	343,800	332,577	323,177	331,199	344,154	302,543
25-44	1,245,280	1,459,423	1,657,785	1,907,485	1,948,467	1,988,761	2,030,584	2,072,400	2,107,015	2,133,243	2,171,160	2,202,163
45-64	1,004,286	1,085,925	1,154,121	1,207,774	1,223,639	1,239,307	1,255,949	1,272,582	1,292,818	1,354,703	1,449,983	1,655,949
65+	417,177	515,485	607,490	707,127	729,893	752,635	775,942	799,208	821,188	857,269	911,062	993,958
0-4	436,928	422,803	404,495	418,703	424,026	428,962	434,208	439,480	443,535	444,568	445,601	437,711
5-17	1,322,607	1,295,041	1,249,805	1,195,371	1,194,194	1,188,7 14	1,181,055	1,173,357	1,171,640	1,177,136	1,175,976	1,210,593
18-24	681,552	759,523	822,033	824,256	811,069	800,405	793,461	786,588	777,598	773,815	777,212	741,185
25-64	2,249,566	2,545,348	2,811,906	3,115,259	3,172,106	3,228,068	3,286,533	3,344,982	3,399,833	3,487,946	3,621,143	3,858,112
65+	417,177	515,485	607,490	707,127	729,893	752,635	775,942	799,208	821,188	857,269	911,062	993,958
0-15	1,555,794	1,505,448	1,436,952	1,416,098	1,416,406	1,412,5 88	1,411,929	1,411,950	1,415,261	1,427,878	1,440,907	1,460,204
16-64	3,134,859	3,517,267	3,851,287	4,137,491	4,184,989	4,233,561	4,283,328	4,332,457	4,377,345	4,455,587	4,579,025	4,787,397
65+	417,177	515,485	607,490	707,127	729,893	752,635	775,942	799,208	821,188	857,269	911,062	993,958
Race												
White	3,921,981	4,222,155	4,465,251	4,681,299	4,719,977	4,756,635	4,796,970	4,837,308	4,877,521	4,957,201	5,076,346	5,265,532
Other	1,185,849	1,316,045	1,430,478	1,579,417	1,611,311	1,642,149	1,674,229	1,706,307	1,736,273	1,783,533	1,854,648	1,976,027
Sex												
Male	2,500,241	2,699,595	2,862,435	3,045,176	3,081,630	3,116,1 19	3,152,993	3,189,851	3,225,011	3,285,060	3,374,918	3,519,407
Female	2,607,589	2,838,605	3,033,294	3,215,540	3,249,658	3,282,665	3,318,206	3,353,764	3,388,783	3,455,674	3,556,076	3,722,152

Source: Demographic Unit, N.C. Office of State Budget and Management.

[1]Not adjusted for under(over) count.

Table 7

RECENT NORTH CAROLINA POPULATION TRENDS
(Values Adjusted To Represent Annual Changes)

		Growth				Natural Increase		Net Migration	
Date	Population	Amount	Percent	Births	Deaths	Amount	Percent	Amount	Percent
April 1970	5,237,248[1]								
		64,317	1.17	86,154	46,362	39,792	0.72	24,524	0.45
April 1980	5,880,415								
		61,264	1.04	84,189	48,740	35,449	0.60	25,815	0.44
July 1981	5,956,995								
		61,052	1.02	84,830	48,877	35,953	0.60	25,099	0.42
July 1982	6,018,047								
		61.743	1.03	84,881	49,360	35,521	0.59	26,222	0.44
July 1983	6,079,790								
		89,165	1.47	84.920	50,603	34,317	0.57	54,848	0.90
July 1984	6,168,955								
		91.791	1.49	87,689	52,010	35.679	0.58	56,112	0.91
July 1985	6,260,716								
		70.572	1.13	89,391[2]	53,018[2]	36,373	0.58	34,172	0.55
July 1986	6,331,288								

[1] Adjusted for estimated undercount.
[2] Assumes July 1985 to July 1986 births and deaths approximated by corresponding values for calendar year 1985.

next 14 years. This increase is a reversal of the 4.2% average annual decline between 1970 and 1985. This reversal is due to the increase in the number of women in the key childbearing age groups, as the "baby boom" generation ages.

Table 8
NORTH CAROLINA
ESTIMATED TEN-YEAR NET MIGRATION
(April to April)

DECADE	1970-1980[1]	1980-1990[1]	1990-2000
NUMBER	280,670	386,568	385,538
RATE[2]	5.36%	6.56%	5.84%

[1]Based on 1970 and 1980 censuses as adjusted for under(over) count.

[2]Migration Rate = (Number of migrants for decade/population at beginning of decade).

Between 1986 and 2000, the school age population (5-17) is projected to increase by only 1.4% (16,400), reversing the large 9.6% (127,000) decline during the period 1970 to 1985. This increase is all within the younger age groups, with the kindergarten age group (5 years of age) expected to gain over 4,000 persons and the grammar school age group (6 - 13) expected to gain 34,000 persons. Contrasted with this total gain of 38,000 persons in the younger school age groups is the expected loss of over 22,000 persons in the high school age group (14 - 17). The traditional college age population (18 - 24) peaked between 1980 and 1985, and is expected to decline by 8.6% (70,000) during the forecast period. The "second wave of the baby boom" will move into the school age groups during the forecast period.

The working age adult population (25 - 64) is expected to increase by 21.6% (686,000) between 1986 and the year 2000. Roughly 60% of this increase will be in the older half of the working age population (45 - 64). This is a reversal of the growth pattern of the last 14 years, when over three-fourths of the increase of the working age population was in the younger worker age group (25 - 44). By 1985 almost all of the "baby boom" cohorts had moved into the younger worker age group.

The retirement age population (65 and over) will continue to expand, reaching almost one million by the year 2000. During the forecast period, the population in this age group will increase by 36.2% (264,000) as a result of: 1) larger population cohorts reaching retirement age, 2) declining mortality, and 3) net in-migration of elderly. The increase in persons will be roughly the same as the corresponding increase during the previous 14 years, although the percentage increase will be much smaller due to the significantly larger base population.

Industrial Production

Manufacturing output in North Carolina is expected to grow at an average annual rate of 2.0% over the forecast period. This average growth rate for manufacturing, however, masks greatly different growth expectations at the industry level.

The recovery of U.S. business fixed investment and expanded trade in capital goods drives output growth in the state's nonelectrical and electrical machinery and instruments industries. Plastics, which are used at all stages of the manufacturing process, will be one of the fastest growing industries as firms create new products, repackage old ones, and substitute plastic for other materials. As the demand for information surges, printing and publishing will be a high-growth industry (see Table 9).

Table 9
North Carolina
Growth in Industrial Production
1986-2000

5 Fastest	
Nonelectrical Machinery	5.1%
Rubber and Plastics	4.5
Electrical Machinery	4.0
Instruments	3.3
Printing and Publishing	3.0
5 Slowest	
Leather Products	-1.8
Textile Mill Products	-0.6
Tobacco Products	0.0
Apparel and Products	0.2
Lumber and Wood Products	1.2

On the negative side, consumer goods industries face a sharp decline in domestic demand and their ability to benefit from the turnaround in trade depends on their labor intensity. Leather output will continue to decline, although at a slower rate than the 9.7% annual drop between 1982 and 1986. Despite a slow rate of increase in U.S. output, textile mill production in North Carolina is expected to decline over the long-term as the state continues to lose its share of U.S. production. Cheap labor costs overseas will continue to hamper expansion of the apparel industry. Growth of lumber production will slow as housing starts slip and the growth of spending on repairs and alterations declines. Table 12, North Carolina Industrial Production Indexes, provides detailed industrial production forecasts.

Labor Force and Employment

The North Carolina labor force is expected to reach 3.76 million by the year 2000, for an average annual rate of growth of 1.1% from 1986. This represents a marked slowdown from the 2.3% average annual gain between 1972 and 1986. Contributors to this slowing of labor force growth are: 1) the previously mentioned deceleration of growth in the state working age population as the "baby boomers" are now fully in the labor force, and 2) a slowing of the rate of increase in the female labor force participation. Reflecting the national trend, the North Carolina labor force participation rate increased sharply from 44.0% in 1972 to 50.5% in 1986. With the surge in female labor force participation now behind us, the state's overall participation rate will increase more slowly to 53.8% in 2000.

In line with the slowdown in labor force growth, employment growth will also be markedly lower than in recent years. Annual increases in survey employment should average 1.2% between 1986 and 2000. With survey employment growing roughly along the line of labor force growth, the rate of civilian unemployment in North Carolina will remain relatively stable over the forecast period.

Growth patterns for the establishment employment series are similar. Total nonfarm employment is forecast to grow by 1.2% annually between 1986 and 2000, down from an average rate of 2.6% during the previous 14 years. The strongest employment gains are expected to be near-term with a gradual slowing through the end of the decade and the first half of the 1990s. Overall, North Carolina should generate more than 510,000 new jobs by the end of the century, nearly 19% above the 1986 level.

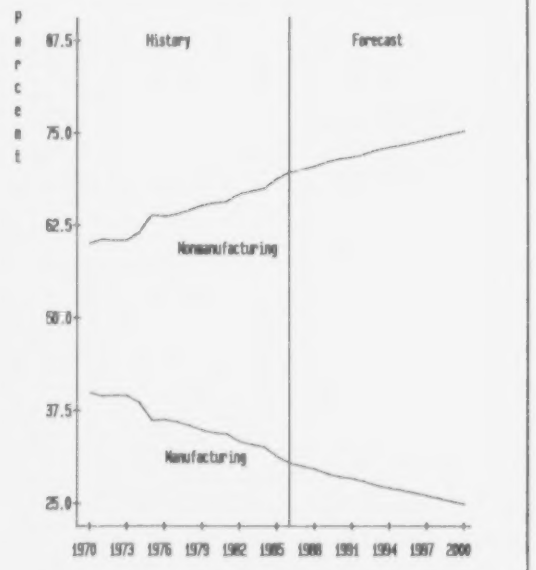
The largest employment gains are expected in the trade and services sectors as the historical experience of the recent past continues. Together these two employment aggregates should combine to create nearly 62% of all new nonfarm jobs in North Carolina over the forecast period, with an expected gain of 180,000 in trade and 137,000 in services. These employment gains translate into average annual growth rates of 1.9% for both sectors.

The conventional logic that significant employment gains would be difficult to sustain without comparable growth in high paying manufacturing jobs appears finally to have been laid to rest as service sector employment growth has exploded in a multitude of directions in recent years. The advent of rapid growth industries such as business, health, professional, and entertainment services has, in effect, created new high wage service sectors that serve a much larger area than the local economy. These "industries" are analogous to the manufacturing sector in the impact they have on the economy. That is, these sectors promote and sustain employment growth in both the high wage segment of the service sector (finance, real estate, insurance, etc.) as well as the low wage segment (retail trade, janitorial services, etc.). It is not obvious, then, to what extent a stagnant manufacturing sector is cause for concern in the state's economy. The issue is further clouded by productivity gains in the state's manufacturing sector which maintains output increases despite stagnant or declining employment levels. These types of gains suggest a situation in which fewer high wage manufacturing jobs are required to support a given number of nonmanufacturing jobs.

Within the other nonmanufacturing sectors, large gains are expected in the area of state and local government as federal budgetary constraints continue to shift a larger share of public service responsibilities onto the states. Overall, state and local government employment is expected to increase by around 146,000 compared to an increase in federal government employment of only 8,000. In fact, state and local government employment is forecast to grow more than twice as fast as federal government employment between 1986 and 2000. Large employment gains are also expected in the finance, insurance, and real estate sectors with nearly 50,000 new jobs expected by 2000. The advent of regional/interstate banking as well as a strong construction sector will do much to promote growth

in these sectors. The transportation, communications, and public utility sectors are expected to increase by a combined 11,500 jobs as they expand to meet the increased demands of a growing state economy.

Chart 11
N.C.SHARES OF TOTAL NONFARM EMPLOYMENT
– MANUFACTURING VS. NONMANUFACTURING



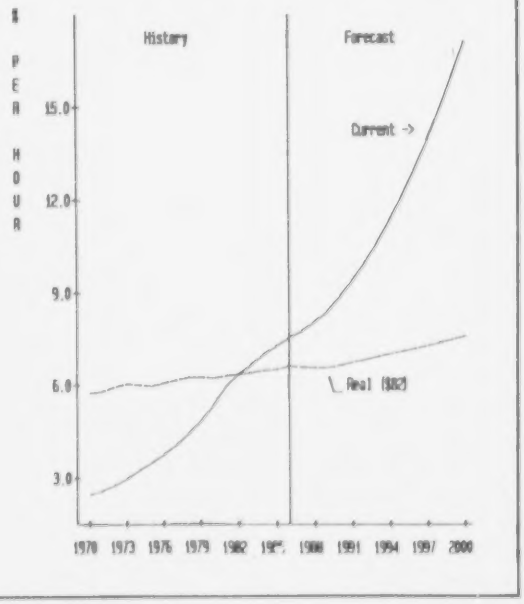
In manufacturing, the short-term outlook calls for employment growth through 1988 as the long-awaited turnaround in the U.S. merchandise trade balance benefits the state's industrial sector. In the longer term, North Carolina will continue to pay a heavy toll for its historical dependence on textile, apparel, and tobacco products as these three sectors should combine for a net employment loss of nearly 79,000 jobs over the forecast hprizon. Clearly, textiles will be hardest hit with losses totalling nearly 58,000 by the year 2000. At 150,000, textile employment will be only one-half of its 1973 annual level. Were it not for the expectation of significant losses in traditionally dominant manufacturing industries, North Carolina would have a strong manufacturing employment outlook. The state's rapidly growing high tech/defense industry, highlighted by the Research Triangle area, is expected to generate nearly 26,600 jobs in the areas of electrical and nonelectrical machinery. The furniture industry should generate more than 6,000 new jobs as the outlook for housing remains relatively strong. The printing and publishing industry also should generate more than 6,000 new jobs.

Wage Rates and State Personal Income

In manufacturing, average hourly earnings of production workers is forecast to increase from $7.55 in 1986 to $17.12 by the year 2000, for an average rate of growth of 6.0% per year. Since consumer price inflation is expected to average slightly less than 5.0% annually, manufacturing workers will experience a 1% annual average gain in their real hourly wage.

Historically, the average wage in the manufacturing sector has increased faster than that for the average nonmanufacturing worker as a result of more rapid productivity growth in the manufacturing sector. Between 1972 and 1986, the average annual wage in manufacturing increased at a rate of 7.6% per year compared to 6.2% in nonmanufacturing. This relationship is expected to hold in the future, but to a much lesser degree due to the emergence of new high wage service sector jobs. The average annual wage is forecast to increase by 6.2% in manufacturing between 1986 and 2000, only slightly faster than the 5.9% growth rate expected in the nonmanufacturing wage.

Chart 12
NORTH CAROLINA AVERAGE HOURLY EARNINGS
– MANUFACTURING CURRENT VS. REAL



North Carolina real total personal income is expected to grow at 2.1% annually over the forecast period, compared to an average rate of 3.3% over the previous 14 years. There are many factors contributing to this slowdown in income growth; including the following:

- The expected slowdown in the rate of growth in total employment and average wage rates will adversely impact total wage and salary disbursements.
- The decline in inflation expectations and therefore in interest rates has resulted in a much slower rate of growth in interest income in recent years. This slow growth pattern is projected to continue into the future.
- Labor income, other than that from wages, grew rapidly during the 1970s as employee benefit packages were sweetened. Corporate cost-cutting will result in slower growth in the future.
- Federal transfer payments to individuals grew rapidly during the 1970's as the number of participants in federal social programs swelled and real benefits were improved. Recent federal budget restraints resulting from the massive deficit are projected into the future, slowing the average growth rate of personal transfer income.

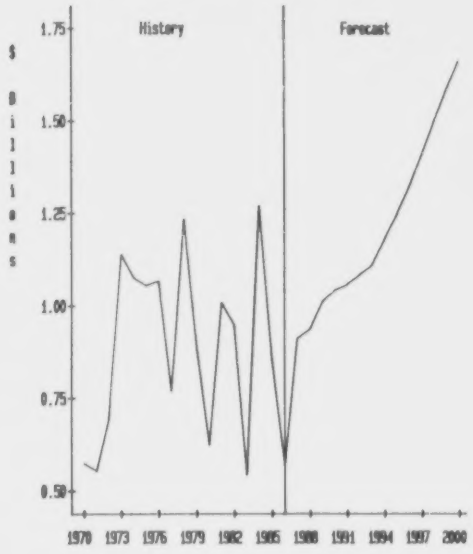
Agriculture

Overall, North Carolina farmers experienced a decline in farm cash receipts during 1986. Farm cash receipts for 1986 are estimated to be $3.7 billion compared to $4.1 billion in 1985.

A combination of a drop in grain and oilseed prices coupled with lower yields in 1986, a small tobacco crop, and the severe drought greatly reduced income from crops. Preliminary estimates indicate that crop receipts totalled $1.7 billion in 1986 compared to $2.2 in 1985.

Tobacco receipts in 1986 are estimated to be approximately $700 million, a 25% decline from the $936 million in 1985. Although the quality of the 1986 tobacco crop was high, it was the smallest crop grown in North Carolina since the tobacco program was established. Conversely, a relatively good production year and strong prices increased livestock and poultry receipts to $2.0 billion in 1986, a slight gain over the prior year.

Chart 13
FARM PROPRIETORS' INCOME



The near-term outlook for farm income is improved somewhat. A wet January-February seems to have broken the protracted drought in North Carolina, at least temporarily, and the cheaper U.S. dollar has brightened the picture for exports of North Carolina agricultural commodities. But with no significant improvement forecast for farm prices, total farm cash receipts will not likely recover to the 1985 level.

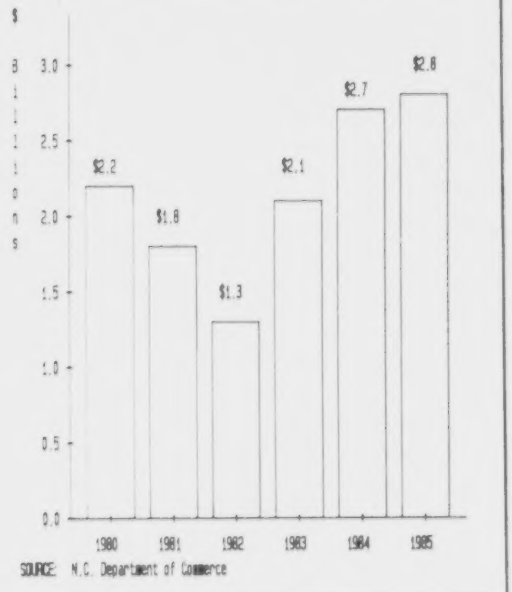
After a welcomed recovery in 1987 from the drought-depressed level of 1986, North Carolina farm proprietors' income is expected to grow at an average annual rate of 4.7% over the remainder of the forecast interval, slightly less than the expected rate of inflation.

Industrial Investment

From 1980 to 1985, the North Carolina Department of Commerce identified nearly $13 billion in new manufacturing investment. Annual investment totals ranged from $1.3 billion in 1982 to $2.8 billion in 1985. In a strong effort to increase productivity and hence price competitiveness in the world market, North Carolina textile manufacturers led all industries with over $2.0 billion in new investment

between 1980 and 1985. Industrial sectors adding over $1.0 billion in new investment over the period include: electrical and electronic machinery, nonelectrical machinery, tobacco manufacturers, and chemicals. These five industries together accounted for approximately one-half of all new investment. In recent years facility expansions have accounted for a substantially larger proportion of investment totals as the relocation of manufacturing firms at the national level has slowed. Investment in existing industries, due in large part to an intense modernization effort, has more than offset the sluggishness in new facility investment activity.

Chart 14
ANNOUNCED NEW AND EXPANDED MANUFACTURING INVESTMENT, 1980–1985



SOURCE: N.C. Department of Commerce

The final state investment totals for 1986 should show a slight decline from the record level of 1985 due to a slowing of investment activity at the national level. As the current recovery cycle has matured, a number of factors have contributed to the slowing of national investment growth -- stagnant manufacturing output, an alarming trade deficit, weakened corporate profits, and low levels of manufacturing capacity utilization. North Carolina investment is not expected to decline to the same extent as national activity due to continued strong expansion activity by existing industries.

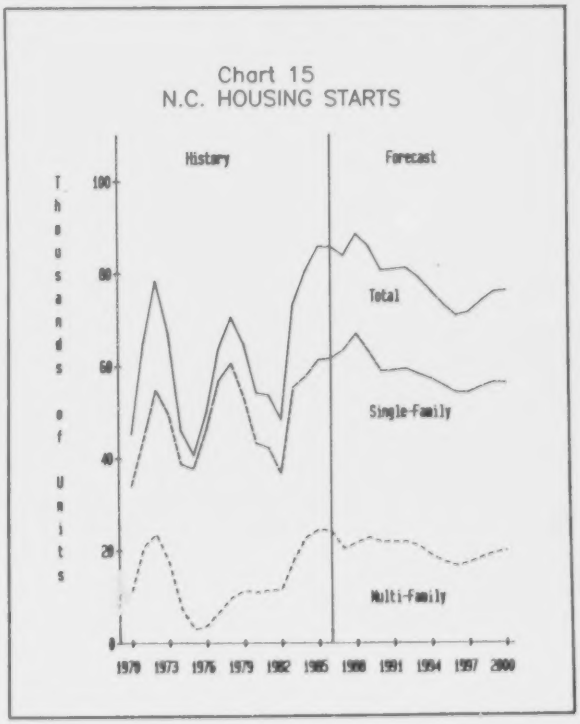
The outlook for future investment is one of cautious optimism. The national economy seems to be headed for a protracted period of sluggish growth. Substantial supply-side constraints point to a future where almost every industry at the national level will experience less rapid growth than has been achieved in the past 14 years. In this environment, state investment growth should marginally exceed that of the nation, but likely will not be exemplary by past standards.

Retail Sales and Housing

After growing by 5.2% in 1986, real retail sales growth slows to near 1% per year in the 1990s, with the fastest growth in durable goods sales. Growth in spending on goods lags behind growth in real disposable income as real spending on services continues to capture a larger share of total consumption.

Housing starts in North Carolina are expected to remain above the 70,000 unit annual rate through the rest of this decade before declining slightly in the first half of the 1990s.

Chart 15
N.C. HOUSING STARTS



In the near-term, the composition of the housing outlook will shift towards single-family units. The recent changes in tax treatment of multi-family unit construction as well as the elimination of credit interest expense other than the mortgage interest deduction have succeeded in tilting the balance towards a preference for single-family unit construction. The result is that the single-family unit share of total housing is expected to rise to approximately 76% in 1987-1988. In all, housing starts in the state should peak at an annual rate of 88,500 in 1988 before declining to a more sustainable range of 75,000 to 80,000 in the 1990s.

Table 10

NORTH CAROLINA LONG-TERM ECONOMIC INDICATORS

	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Employment(000)											
Total Nonagricultural	1,786.5	2,380.3	2,391.4	2,347.1	2,419.0	2,565.1	2,645.5	2,722.6	2,793.8	2,875.2	2,925.4
Manufacturing	713.4	820.1	820.7	782.3	796.2	835.6	827.4	827.5	838.1	851.5	848.1
Nondurables	501.9	516.0	510.1	489.1	493.8	501.0	485.7	491.8	502.0	510.0	507.6
Durables	216.6	304.1	310.7	293.3	302.3	334.6	341.7	335.7	336.1	341.5	340.5
Nonmanufacturing	1,064.3	1,560.1	1,570.7	1,564.8	1,622.9	1,729.5	1,818.1	1,895.1	1,955.7	2,023.8	2.077.4
Average Hourly Earnings-Mfg.($)	2.46	5.38	5.94	6.35	6.68	7.01	7.29	7.55	7.77	8.07	8.41
Average Nonfarm Wage Rate($)	6,435	12,797	13,996	14,937	15,798	16,633	17,468	18,329	18,804	19,341	21,117
Total Personal Income ($ Bil.)	16.42	47.06	52.71	55.87	60.66	67.81	72.67	77.46	81.90	86.64	91.85
Farm	0.57	0.62	1.01	0.95	0.54	1.27	0.85	0.57	0.91	0.94	1.01
Nonfarm	15.85	46.44	51.71	54.92	60.12	66.54	71.82	76.89	80.99	85.70	90.84
Wages	11.50	30.46	33.47	35.06	38.22	42.66	46.26	49.85	52.61	55.67	58.37
Other	4.35	15.98	18.24	19.86	21.90	23.87	25.56	27.04	28.38	30.04	31.97
Total Population(000)	5,107.8	5,895.7	5,957.0	6,018.0	6,079.8	6,16 9.0	6,260.7	6,331.3	6,398.8	6,471.2	6,543.6
Per Capita Income ($)	3,214	7,982	8,849	9,283	9,977	10,992	11,607	12,234	12,800	13,388	14,037
Real Disposable Income Per Capita (1972 $)	2,995	3,712	3,758	3,743	3,920	4,182	4,257	4,397	4,466	4,511	4,517
Retail Sales (1972 $)	N/A	11.35	11.69	12.27	14.44	15.58	16.66	17.52	18.06	18.50	18.61
Durable Goods	N/A	4.28	4.51	4.81	6.43	7.06	7.85	8.11	8.35	8.53	8.43
Nondurable Goods	N/A	7.07	7.18	7.46	8.01	8.52	8.81	9.41	9.71	9.97	10.18
Housing Starts (OOO)	45.16	54.14	53.67	48.29	73.32	80.42	85.68	85.65	83.73	88.51	85.80
Single Family	33.88	43.17	42.18	36.58	55.36	57.69	61.23	61.61	63.43	66.89	63.03
Multi-family	11.28	10.97	11.49	11.71	17.96	22.73	24.45	24.04	20.30	21.62	22.77

Table 10 - Continued

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Employment (000)											
Total Nonagricultural	2,958.8	2,991.7	3,026.3	3,053.1	3,071.0	3,092.6	3,121.8	3,149.9	3,175.6	3,204.2	3,234.2
Manufacturing	845.2	848.1	845.0	836.1	829.5	825.9	822.6	818.3	813.1	807.9	802.6
Nondurables	500.6	494.9	487.4	477.7	468.6	461.8	456.1	449.8	442.9	436.0	429.5
Durables	344.6	353.2	357.6	358.5	361.0	364.1	366.5	368.5	370.3	371.9	373.1
Nonmanufacturing	2,113.5	2,143.6	2,181.3	2,217.0	2,241.4	2,266.6	2,299.1	2,331.6	2,362.5	2,396.4	2,431.6
Average Hourly Earnings-											
Mfg.($)	8.87	9.40	9.97	10.61	11.34	12.12	12.98	13.92	14.91	15.98	17.12
Average Nonfarm Wage											
Rate($)	21,336	22,622	24,012	25,598	27,369	29,247	31,263	33,478	35,879	38,407	41,106
Total Personal Income											
($ Bil.)	98.50	105.56	113.15	121.30	130.10	139.86	150.65	162.43	175.30	189.25	204.33
Farm	1.04	1.06	1.08	1.11	1.18	1.25	1.32	1.41	1.50	1.58	1.66
Nonfarm	97.46 104.50	112.06	120.19	128.92	138.61	149.33	161.02	173.81	187.67	202.67	
Wages	63.13	67.69	72.68	78.18	84.08	90.49	97.64	105.51	114.00	123.14	133.03
Other	34.33	36.82	39.38	42.02	44.84	48.12	51.68	55.51	59.80	64.53	69.64
Total Population (000)	6,613.8	6,677.3	6,740.7	6,804.2	6,867.7	6,931.0	6,993.8	7,056.5	7,119.3	7,182.1	7,241.6
Per Capita Income ($)	14,894	15,809	16,786	17,827	18,943	20,178	21,540	23,018	24,624	26,351	28,216
Real Disposable Income											
Per Capita (1972 $)	4,595	4,660	4,727	4,788	4,835	4,883	4,940	5,001	5,070	5,143	5,221
Retail Sales (1972 $)	18.80	19.02	19.22	19.43	19.59	19.75	19.93	20.14	20.37	20.61	20.85
Durable Goods	8.55	8.71	8.85	8.98	9.07	9.18	9.30	9.44	9.60	9.77	9.93
Nondurable Goods	10.25	10.31	10.37	10.45	10.52	10.57	10.63	10.70	10.77	10.84	10.92
Housing Starts (000)	80.56	80.80	81.20	79.01	76.04	73.15	70.80	71.59	73.94	75.93	76.32
Single Family	58.78	59.03	59.35	58.13	57.18	55.66	54.15	54.22	55.46	56.46	56.27
Multi-family	21.78	21.77	21.85	20.88	18.86	17.49	16.65	17.37	18.48	19.47	20.05

Source: Data Resources, Inc., Regional Information Service, and the N.C. Office of State Budget and Management.

Table 11

NORTH CAROLINA LONG-TERM EMPLOYMENT PROJECTIONS

Employment (000)	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total Nonagricultural	1,786.5	2,380.3	2,391.4	2,347.1	2,419.0	2,565.1	2,645.5	2,722.6	2,793.8	2,875.2	2,925.4
Manufacturing	713.4	820.1	820.7	782.3	796.2	835.6	827.4	827.5	838.1	851.5	848.1
Nondurable Goods	501.9	516.0	510.1	489.1	493.8	501.0	485.7	491.8	502.0	510.0	507.6
Food & Products	41.4	44.0	43.3	43.3	42.9	44.0	45.5	47.5	47.9	48.8	49.2
Tobacco	28.7	24.3	24.9	24.7	24.4	24.5	25.8	25.2	24.5	24.5	24.1
Textile Mill	280.7	245.7	238.1	223.2	224.2	221.6	207.2	208.2	214.7	216.1	211.9
Apparel	75.1	88.1	88.4	84.7	88.4	91.3	86.8	89.8	90.9	93.0	93.4
Paper & Products	18.0	21.3	21.7	21.8	21.9	22.3	22.4	22.3	23.1	23.7	23.7
Printing & Publ.	14.7	20.5	21.0	21.5	22.6	24.7	26.2	27.3	28.2	29.2	29.7
Chemicals	27.7	39.4	39.8	38.1	38.9	38.4	37.6	37.2	37.7	38.5	38.6
Rubber & Plastics	N/A	27.1	27.1	25.6	26.0	29.5	29.9	29.9	30.9	32.4	33.1
Other Nondurables	15.5	5.6	5.7	6.1	5.5	4.8	4.2	4.5	4.0	4.0	3.9
Durable Goods	216.6	304.1	310.7	293.3	302.3	334.6	341.7	335.7	336.1	341.5	340.5
Lumber & Wood	27.2	35.5	34.6	31.6	34.8	36.9	36.0	35.2	36.9	37.5	36.8
Furniture	66.2	81.5	83.8	78.9	79.8	84.8	85.0	85.1	83.9	82.8	82.0
Stone, Clay, & Glass	14.7	18.2	17.9	16.0	16.9	19.1	19.4	19.7	19.4	19.4	19.7
Primary Metals	5.6	8.1	9.1	8.7	9.3	10.6	10.6	10.3	9.9	9.9	10.1
Fabricated Metals	16.0	26.0	26.7	24.8	24.7	26.4	26.8	26.4	26.4	26.9	26.5
Nonelectrical Mach.	29.2	49.5	50.9	49.7	50.0	56.2	57.7	55.3	54.0	56.5	57.5
Electrical Machery	40.9	55.3	56.7	53.4	54.4	63.4	66.3	63.0	65.1	67.0	66.9
Transportation Eq.	8.2	14.9	15.8	15.8	17.6	21.3	23.1	23.7	22.9	23.3	23.0
Instruments	N/A	8.6	8.6	8.2	8.5	9.1	9.6	9.7	10.0	10.3	10.4
Miscellaneous Mfg.	N/A	6.5	6.5	6.2	6.4	6.9	7.2	7.3	7.6	7.7	7.7
Nonmanufacturing	1,064.3	1,560.1	1,570.7	1,564.8	1,622.9	1,729.5	1,818.1	1,895.1	1,955.7	2,023.8	2,077.4
Mining	3.9	5.2	4.9	4.6	4.4	4.6	4.8	4.6	4.9	4.6	4.8
Contract Construction	96.6	118.8	115.7	106.9	112.3	132.6	149.2	161.2	160.7	165.5	166.4
T.C.P.U.*	92.1	116.5	116.9	114.7	120.5	126.6	128.8	132.9	138.6	141.8	143.7
F.I.R.E.*	69.5	95.5	98.1	97.8	100.4	103.8	108.6	115.6	121.6	128.1	133.4
Trade	324.5	472.9	478.8	482.7	507.9	548.9	576.2	599.8	617.2	639.8	657.5
Services	213.6	341.4	353.0	357.9	370.4	399.4	427.6	452.6	469.4	491.3	508.3
Government	264.2	409.9	403.4	400.2	407.1	413.7	422.9	428.3	443.4	452.6	463.4
Federal	N/A	49.1	47.8	48.6	49.6	50.1	51.4	52.3	53.1	53.7	54.4
State & Local	N/A	360.8	355.6	351.5	357.4	363.6	371.4	376.0	390.3	399.0	409.0

Table 11 - Continued

Employment (000)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1989	2000
Total Nonagricultural	2,958.8	2,991.7	3,026.3	3,053.1	3,071.0	3,092.6	3,121.8	3,149.9	3,175.6	3,204.2	3,234.2
Manufacturing	845.2	848.1	845.0	836.1	829.5	825.9	822.6	818.3	813.1	807.9	802.6
Nondurable Goods	500.6	494.9	487.4	477.7	468.6	461.8	456.1	449.8	442.9	436.0	429.5
Food & Products	49.2	49.2	49.0	48.5	47.9	47.4	47.1	46.8	46.4	46.0	45.6
Tobacco	23.9	23.6	23.2	22.8	22.5	22.2	22.0	21.7	21.5	21.2	21.0
Textile Mill	205.8	200.3	193.9	186.9	180.5	175.2	170.7	165.8	160.5	155.3	150.3
Apparel	91.5	89.8	87.8	85.4	83.2	81.5	79.9	78.2	76.4	74.6	73.0
Paper & Products	23.6	23.8	23.9	23.8	23.7	23.7	23.7	23.7	23.7	23.7	23.7
Printing & Publ.	30.0	30.4	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3
Chemicals	38.8	39.0	39.0	38.9	38.8	39.9	39.1	39.1	39.1	39.1	39.1
Rubber & Plastics	33.9	35.0	35.9	36.5	37.0	37.6	38.2	38.8	39.4	40.1	40.8
Other Nondurables	3.9	3.8	3.7	3.6	3.5	3.3	3.3	3.2	3.1	2.9	2.8
Durable Goods	344.6	353.2	357.6	358.5	361.0	364.1	366.5	368.5	370.3	371.9	373.1
Lumber & Wood	36.4	36.5	36.6	36.4	36.1	35.7	35.5	35.3	35.5	35.8	36.1
Furniture	82.9	84.5	86.2	87.1	88.5	89.5	90.0	90.2	90.6	91.1	91.4
Stone, Clay, & Glass	19.5	19.9	20.2	20.2	20.1	20.2	20.1	20.1	20.0	19.9	19.8
Primary Metals	10.2	10.5	10.7	10.7	10.7	10.7	10.7	10.7	10.6	10.4	10.3
Fabricated Metals	26.7	27.6	28.1	28.3	28.6	28.9	29.2	29.4	29.6	29.7	29.8
Nonelectrical Mach.	59.1	61.0	61.8	62.2	62.9	63.7	64.4	65.6	66.7	67.7	68.7
Electrical Machery	68.6	71.7	72.4	72.1	72.7	73.8	74.6	75.2	75.6	75.9	76.2
Transportation Eq.	22.9	23.1	23.1	23.0	23.0	23.1	23.2	23.1	22.8	22.4	22.1
Instruments	10.5	10.6	10.7	10.8	10.9	11.1	11.3	11.4	11.5	11.5	11.6
Miscellaneous Mfg.	7.7	7.8	7.8	7.7	7.6	7.5	7.5	7.5	7.4	7.3	7.2
Nonmanufacturing	2,113.5	2,143.6	2,181.3	2,217.0	2,241.4	2,266.6	2,299.1	2,331.6	2,362.5	2,396.4	2,431.6
Mining	5.0	4.9	4.8	4.7	4.5	4.4	4.3	4.3	4.3	4.3	4.3
Contract Construction	165.1	162.2	163.6	164.8	163.2	160.9	160.6	161.5	162.6	164.7	166.4
T.C.P.U.*	145.0	146.8	147.7	147.6	147.2	146.9	146.7	146.1	145.6	145.0	144.4
F.I.R.E.*	137.2	140.7	143.5	146.1	148.6	151.2	153.9	156.5	159.2	162.0	164.9
Trade	667.4	676.7	691.7	704.5	711.5	720.9	735.2	747.0	756.8	768.1	780.1
Services	520.3	529.0	536.9	545.5	552.5	558.7	565.0	571.0	576.8	582.8	589.3
Government	473.6	483.3	493.1	503.8	514.0	523.6	533.6	545.2	557.2	569.5	582.2
Federal	55.0	55.5	55.9	56.4	56.9	57.3	57.8	58.5	59.1	59.7	60.3
State & Local	418.6	427.8	437.2	447.4	457.1	466.3	475.7	486.7	498.1	509.7	521.8

*Abbreviations: T.C.P.U. - Transportation, Communication, and Public Utilities
F.I.R.E. - Finance, Insurance, and Real Estate

Source: Data Resources, Inc., Regional Information Service, December 1986.

Table 12
NORTH CAROLINA INDUSTRIAL PRODUCTION INDEXES
(Average Annual Growth Rates)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Manufacturing	1.184	1.285	1.391	1.403	1.432	1.487	1.549	1.584	1.620	1.669
% Change	-1.4	8.5	8.2	0.9	2.1	3.8	4.2	2.3	2.3	3.0
Food & Products	1.287	1.314	1.353	1.399	1.479	1.520	1.577	1.626	1.661	1.696
% Change	7.3	2.1	3.0	3.4	5.7	2.8	3.8	3.1	2.2	2.1
Tobacco Products	1.006	0.993	1.049	1.126	1.099	1.093	1.106	1.107	1.113	1.114
% Change	2.1	-1.3	5.6	7.3	-2.4	-0.5	1.2	0.1	0.5	0.1
Textile Mill Products	0.915	1.022	1.021	0.954	0.977	1.032	1.059	1.060	1.050	1.045
% Change	-4.9	11.7	-0.1	-6.6	2.4	5.6	2.6	0.1	-0.9	-0.4
Apparel & Products	1.148	1.277	1.364	1.310	1.366	1.404	1.468	1.502	1.503	1.499
% Change	-4.5	7.1	13.2	2.3	1.1	2.1	3.6	0.1	2.7	5.5
Lumber & Wood Products	0.861	1.021	1.093	1.057	1.087	1.179	1.221	1.212	1.210	1.230
% Change	-1.7	18.6	7.1	-3.3	2.8	8.5	3.6	-0.7	-0.2	1.7
Furniture & Fixtures	1.491	1.618	1.763	1.788	1.821	1.851	1.877	1.909	1.975	2.064
% Change	-7.5	8.5	9.0	1.4	1.8	1.6	1.4	1.7	3.5	4.5
Paper & Products	1.417	1.523	1.589	1.585	1.591	1.707	1.788	1.836	1.884	1.941
% Change	3.4	7.5	4.3	-0.3	0.4	7.3	4.7	2.7	2.6	3.0
Printing & Publishing	1.323	1.424	1.603	1.705	1.808	1.904	2.002	2.074	2.131	2.204
% Change	9.4	7.6	12.6	6.4	6.0	5.3	5.1	3.6	2.7	3.4
Chemicals & Products	1.434	1.532	1.648	1.631	1.653	1.726	1.802	1.861	1.924	1.991
% Change	-9.2	6.8	7.6	-1.0	1.3	4.4	4.4	3.3	3.4	3.5
Rubber & Plastics	1.325	1.457	1.670	1.703	1.717	1.833	1.973	2.072	2.172	2.298
% Change	-1.0	10.0	14.6	2.0	0.8	6.8	7.6	5.0	4.8	5.8
Other Nondurables	1.522	1.443	1.220	1.054	1.011	1.014	1.017	1.009	1.019	1.009
% Change	11.6	-5.2	-15.5	-13.6	-4.1	0.3	0.3	-0.8	1.0	-1.0
Stone, Clay & Glass	1.098	1.275	1.510	1.547	1.624	1.657	1.711	1.770	1.796	1.873
% Change	-10.5	16.1	18.4	2.5	5.0	2.0	3.3	3.4	1.5	4.3
Primary Metals	1.209	1.456	1.814	1.842	1.841	1.810	1.859	1.93 3	2.014	2.118
% Change	-6.6	20.4	24.6	1.5	-0.1	-1.7	2.7	4.0	4.2	5.2
Fabricated Metals	1.128	1.208	1.368	1.399	1.415	1.445	1.497	1.499	1.539	1.623
% Change	-4.5	7.1	13.2	2.2	1.1	2.1	3.6	0.1	2.7	5.5
Nonelectrical Machinery	2.128	2.303	2.807	3.038	3.080	3.160	3.468	3.684	3.942	4.231
% Change	3.7	8.2	21.9	8.2	1.4	2.6	9.7	6.2	7.0	7.3
Electrical Machinery	1.468	1.569	1.911	2.049	2.031	2.159	2.289	2.358	2.491	2.679
% Change	-0.1	6.9	21.8	7.2	-0.9	6.3	6.0	3.0	5.6	7.5
Transportation Equipment	1.819	2.280	2.818	3.086	3.250	3.279	3.439	3.510	3.597	3.742
% Change	2.8	25.3	23.6	9.5	5.3	0.9	4.9	2.1	2.5	4.0
Instruments	1.730	1.828	2.056	2.141	2.246	2.343	2.471	2.550	2.624	2.723
% Change	-0.5	5.7	12.5	4.1	4.9	4.3	5.5	3.2	2.9	3.8
Miscellaneous Mfg.	1.246	1.349	1.471	1.552	1.636	1.722	1.794	1.844	1.911	1.986
% Change	0.3	8.3	9.0	5.5	5.4	5.3	4.2	2.8	3.6	3.9

Table 12 · Continued

	1992	1993	1989	1995	1996	1997	1998	1999	2000	Avg. Annual Growth 1986-2000
Total Manufacturing	1.703	1.721	1.741	1.767	1.795	1.821	1.844	1.867	1.890	
% Change	2.0	1.1	1.2	1.5	1.6	1.4	1.3	1.2	1.2	2.0
Food & Products	1.721	1.734	1.740	1.752	1.769	1.785	1.798	1.811	1.824	
% Change	1.5	0.8	0.3	0.7	1.0	0.9	0.7	0.7	0.7	1.5
Tobacco Products	1.110	1.105	1.101	1.100	1.102	1.102	1.101	1.100	1.100	
% Change	-0.4	-0.5	-0.4	-0.1	0.2	0.0	-0.1	-0.1	0.0	0.0
Textile Mill Products	1.032	1.011	0.992	0.977	0.966	0.952	0.935	0.917	0.900	
% Change	-1.2	-2.0	-1.9	-1.5	-1.1	-1.4	-1.8	-1.9	-1.9	-0.6
Apparel & Products	1.493	1.477	1.461	1.454	1.446	1.436	1.424	1.410	1.398	
% Change	3.5	1.8	2.0	2.3	1.8	1.7	1.5	1.4	1.2	0.2
Lumber & Wood Products	1.250	1.253	1.247	1.239	1.236	1.235	1.245	1.261	1.275	
% Change	1.6	0.2	-0.5	-0.6	-0.2	-0.1	0.8	1.3	1.1	1.2
Furniture and Fixtures	1.943	1.976	2.004	2.035	2.063	2.089	2.113	2.134	2.148	
% Change	3.7	1.7	1.4	1.5	1.4	1.3	1.1	1.0	0.7	2.6
Paper & Products	1.993	2.027	2.057	2.093	2.130	2.165	2.201	2.236	2.269	
% Change	2.7	1.7	1.5	1.8	1.8	1.6	1.7	1.6	1.5	2.6
Printing & Publishing	2.278	2.334	2.385	2.444	2.504	2.560	2.618	2.678	2.739	
% Change	3.4	2.5	2.2	2.5	2.5	2.2	2.3	2.3	2.3	3.0
Chemicals & Products	2.043	2.083	2.129	2.186	2.243	2.292	2.340	2.388	2.435	
% Change	2.6	2.0	2.2	2.7	2.6	2.2	2.1	2.1	2.0	2.8
Rubber & Plastics	2.420	2.512	2.593	2.681	2.777	2.870	2.967	3.071	3.176	
% Change	5.3	3.8	3.2	3.4	3.6	3.3	3.4	3.5	3.4	4.5
Other Nondurables	0.992	0.965	0.937	0.912	0.892	0.872	0.848	0.819	0.787	
% Change	-1.7	-2.7	-2.9	-2.7	-2.2	-2.2	-2.8	-3.4	-3.9	-1.8
Stone, Clay & Glass	1.943	1.976	2.004	2.035	2.063	2.089	2.113	2.134	2.148	
% Change	3.7	1.7	1.4	1.5	1.4	1.3	1.1	1.0	0.7	2.0
Primary Metals	2.210	2.255	2.293	2.346	2.385	2.415	2.438	2.448	2.446	
% Change	4.3	2.0	1.7	2.3	1.7	1.3	1.0	0.4	-0.1	2.1
Fabricated Metals	1.679	1.710	1.745	1.785	1.818	1.849	1.876	1.902	1.925	
% Change	3.5	1.8	2.0	2.3	1.8	1.7	1.5	1.4	1.2	2.2
Nonelectrial Machinery	4.439	4.617	4.806	5.011	5.218	5.461	5.704	5.944	6.182	
% Change	4.9	4.0	4.1	4.3	4.1	4.7	4.5	4.2	4.0	5.1
Electrical Machinery	2.785	2.843	2.932	3.045	3.148	3.246	3.333	3.417	3.506	
% Change	4.0	2.1	3.1	3.9	3.4	3.1	2.7	2.5	2.6	4.0
Transportation Equipment	3.854	3.934	4.033	4.139	4.253	4.329	4.368	4.398	4.429	
% Change	3.0	2.1	2.5	2.6	2.8	1.8	0.9	0.7	0.7	2.2
Instruments	2.808	2.877	2.962	3.071	3.189	3.291	3.377	3.448	3.511	
% Change	3.1	2.5	3.0	3.7	3.8	3.2	2.6	2.1	1.8	3.3
Miscellaneous Mfg.	2.035	2.048	2.060	2.097	2.136	2.166	2.191	2.206	2.211	
% Change	2.5	0.6	0.6	1.8	1.9	1.4	1.2	0.7	0.2	2.2

Source: Data Resources, Inc., Regional Information Service, December 1986.

Office of State Budget and Management
116 West Jones Street
Raleigh, North Carolina 27611

Table 13
NORTH CAROLINA INVESTMENT TRENDS
1980 - 1985

Manufacturing Sector	1980	1981	1982	1983	1984	1985	Six Year Totals	Percent Of Total
Food Products	100,594	62,001	31,248	107,750	92,240	92,483	486,316	3.77%
Tobacco Products	173,506	128,876	140,833	242,058	180,242	489,533	1,355,068	10.51
Textiles	212,812	444,054	333,490	375,991	547,392	359,096	2,272,835	17.63
Apparel	17,637	37,166	28,432	25,004	40,383	24,018	172,640	1.34
Lumber and Wood	27,488	36,056	12,993	40,875	136,867	89,362	343,641	2.66
Furniture and Fixtures	43,469	59,238	24,594	48,995	70,322	63,675	310,293	2.41
Paper and Allied Products	54,424	190,681	113,372	194,227	110,4 92	149,782	812,978	6.30
Printing and Publishing	10,368	20,074	33,785	33,507	67,579	33,726	199,039	1.54
Chemicals	230,770	246.939	112,306	285,820	182,409	172,514	1,230,758	9.54
Petroleum Products	67,650	5,883	0	0	6,875	2,867	83,275	0.65
Rubber, Plastic Products	67,104	69,402	40,547	94,696	72,784	157,421	501,954	3.89
Leather Products	4,450	1,015	3,353	0	846	102	9,766	0.07
Stone, Clay, and Glass	24,950	28,141	24,303	64,167	99,157	53,495	294,213	2.28
Primary Metals	145,722	2,742	20,565	56,800	59,402	39,396	324,627	2.52
Fabricated Metals	69,026	138,959	57,630	54,663	93,515	44,808	458,601	3.56
Nonelectrical Machinery	558,835	119,010	124,939	99,259	254,429	215,625	1,372,097	10.64
Electrical/Electronic Mach.	238,989	144,496	124,558	316,192	309,755	353,448	1,487,438	11.54
Transportation Equipment	160,594	64,617	26,891	53,775	86,572	173,001	565,450	4.39
Instruments	24,108	11,080	30,075	20,906	131,152	51,889	269,210	2.09
Miscellaneous*	7,700	1,722	5,770	8,510	128,955	192,116	344,773	2.67
Totals	2,240,196	1,812,152	1,289,684	2,123,195	2,671,368	2,758,377	12,894,972	100.00

*Contains Miscellaneous Manufacturing and "Other Program Results".

Source: N.C. Department of Commerce.

Office of State Budget and Management
116 West Jones Street
Raleigh, North Carolina 27611

SAFETY PAYS

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